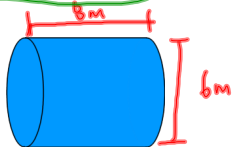


Formula for the **Volume** of any shape

Review

$$V = A_B \times H_T$$


$$V_{\text{cyl}} = \pi r^2 \times H_T$$

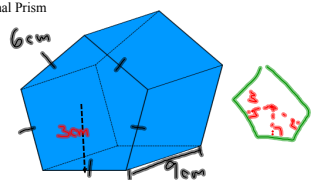
$$V_{\text{cyl}} = \pi (3)^2 \times 6$$

$$V_{\text{cyl}} = 3.14(9) \times 6$$

$$V_{\text{cyl}} = 226.08 \text{ m}^3$$

May 13-1:43 PM

Volume of Polygonal Prism



$$V = A_B \times H_T$$

$$V = \frac{P_a}{2} \times H_T$$

$$V = \frac{30(3)}{2} \times 9 \text{ cm}$$

$$V = \frac{90}{2} \times 9$$

$$V = 45 \times 9$$

$$V = 405 \text{ cm}^3$$

$P = 5 \times 6 = 30 \text{ cm}$

$a = 3 \text{ cm}$

apothem


Formula for area of any polygon
 $A = \frac{P \times a}{2}$

May 14-1:13 PM

Prism - 10 prism with a polygonal base and triangular sides

Pentagonal Pyramid

Regular Pentagon
 $s = 6 \text{ cm}$
 $a = 2.5 \text{ cm}$



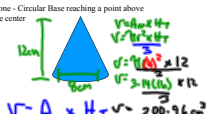
$$V = \frac{A_B \times H_T}{3}$$

$$= \frac{37.5 \times 9}{3}$$

$$= \frac{337.5}{3}$$

$$= 112.5 \text{ cm}^3$$

Cone - Circular Base reaching a point above the center



$$V = \frac{A_B \times H_T}{3}$$

$$V = \frac{\pi r^2 \times H_T}{3}$$

$$V = \frac{3.14(6)^2 \times 12}{3}$$

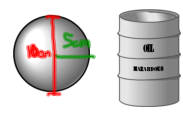
$$V = \frac{3.14(36) \times 12}{3}$$

$$V = \frac{1356.48}{3}$$

$$V = 452.16 \text{ cm}^3$$

May 13-1:38 PM

Volume of a Sphere



Solution #1

$$V = \frac{4}{3} \pi r^2 \times H_T$$

$$V = \frac{4}{3} \pi (5)^2 \times 2$$

$$V = \frac{4}{3} \pi (25) \times 2$$

$$V = \frac{4}{3} \pi (50)$$

$$V = \frac{4}{3} \pi (157.08)$$

$$V = \frac{4}{3} \pi (157.08)$$

$$V = 1570.8$$

$$V = 523.3 \text{ cm}^3$$

Solution #2

$$V = \frac{4}{3} \pi r^3$$

$$V = \frac{4}{3} \pi (5)^3$$

$$V = \frac{4}{3} \pi (125)$$

$$V = \frac{4}{3} \pi (1570.8)$$

$$V = 523.3$$

May 17-1:03 PM

p. 427- 429 q. 4,5,7,10,14

May 17-1:25 PM